What is claimed is:

1. A polishing composition comprising at least water, alumina and a sol product derived from an aluminum salt.

2. A polishing composition according to claim 1, further comprising a polishing accelerator.

3. A polishing composition according to claim 2, wherein the polishing accelerator is at least one species selected from the group consisting of organic acids, inorganic acids and salts thereof.

4. A polishing composition according to claim 1, wherein the sol product is a mixture of an aluminum salt with at least one species selected from the group consisting of sodium hydroxide, potassium hydroxide, ammonia, organic amine compounds, amine chelate compounds, aminocarboxylic acids, aminocarboxylic acid chelate compounds and aminophosphonic acid chelate compounds.

5. A polishing composition according to claim 2, wherein the sol product is a mixture of an aluminum salt with at least one species selected from the group consisting of sodium hydroxide, potassium hydroxide, ammonia, organic amine compounds, amine chelate compounds, aminocarboxylic acids, aminocarboxylic acid chelate compounds and aminophosphonic acid chelate compounds.

6. A polishing composition according to claim 1, wherein the sol product is a mixture of at least one species selected from among hydrates and anhydrates of aluminum salts

including inorganic acid aluminum salts that include aluminum sulfate, aluminum chloride, aluminum nitrate, aluminum phosphate and aluminum borate, and organic acid aluminum salts that include aluminum acetate, aluminum lactate and aluminum stearate with at least one species selected from among sodium hydroxide, potassium hydroxide, ammonia, organic amine compounds, amine chelate compounds, aminocarboxylic acids, aminocarboxylic acid chelate compounds and amino-phosphonic acid chelate compounds.

7. A polishing composition according to claim 2, wherein the sol product is a mixture of at least one species selected from among hydrates and anhydrates of aluminum salts including inorganic acid aluminum salts that include aluminum sulfate, aluminum chloride, aluminum nitrate, aluminum phosphate and aluminum borate, and organic acid aluminum salts that include aluminum acetate, aluminum lactate and aluminum stearate with at least one species selected from among sodium hydroxide, potassium hydroxide, ammonia, organic amine compounds, amine chelate compounds, aminocarboxylic acids, aminocarboxylic acid chelate compounds and amino-phosphonic acid chelate compounds.

8. A polishing composition according to claim 1, wherein the sol product is a mixture of at least one aluminum salt selected from the group consisting of aluminum sulfate, aluminum chloride and aluminum nitrate with at least one compound selected from the group consisting of sodium hydroxide, potassium hydroxide, ammonia, triethanolamine and aminotrismethylenephosphonic acid.

9. A polishing composition according to claim 2, wherein the sol product is a mixture of at least one aluminum salt

selected from the group consisting of aluminum sulfate, aluminum chloride and aluminum nitrate with at least one compound selected from the group consisting of sodium hydroxide, potassium hydroxide, ammonia, triethanolamine and aminotrismethylenephosphonic acid.

10. A polishing composition according to claim 2, wherein the polishing accelerator is contained in an amount of 0.01-10 mass%.

11. A polishing composition according to claim 1, wherein the sol product is contained in an amount of 0.01-5 mass%.

12. A polishing composition according to claim 2, wherein the sol product is contained in an amount of 0.01-5 mass%.

13. A method of producing a sol product derived from an aluminum salt, which comprises mixing, by means of a stirrer, an aluminum salt with at least one species selected from the group consisting of sodium hydroxide, potassium hydroxide, ammonia, organic amine compounds, amine chelate compounds, aminocarboxylic acids, aminocarboxylic acid chelate compounds and aminophosphonic acid chelate compounds.

14. A method of producing a sol product according to claim 13, wherein the aluminum salt is at least one species selected from the group consisting of aluminum sulfate, aluminum chloride and aluminum nitrate.

15. A method of producing a sol product according to claim 13, wherein the stirrer is a high-shear stirrer.

16. A method of producing a sol product according to

claim 14, wherein the stirrer is a high-shear stirrer.

17. A method of producing a magnetic recording disk substrate, which comprises rotating at least one of a magnetic recording disk raw substrate and a polishing pad while the polishing composition as recited in claim 1 is fed into a space between the substrate and the pad.

18. A method of producing a magnetic recording disk substrate, which comprises rotating at least one of a magnetic recording disk raw substrate and a polishing pad while the polishing composition as recited in claim 2 is fed into a space between the substrate and the pad.

19. A method of producing a magnetic recording disk substrate according to claim 17, wherein the magnetic recording disk raw substrate is an aluminum magnetic recording disk substrate that is chemically plated with Ni-P.

20. A method of producing a magnetic recording disk substrate according to claim 18, wherein the magnetic recording disk raw substrate is an aluminum magnetic recording disk substrate that is chemically plated with Ni-P.